Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims:

Claim 1. (Currently Amended) A method for controlling a welding process or a welding current source using a consumable electrode, in which a welding process adjusted on the basis of several different welding parameters and controlled by a control device is carried out by a welding current source after the ignition of an electric arc, and at least one welding process phase having a high energy input and a welding process phase having a low energy input resulting from different material transitions and/or electric arc types are cyclically combined during the welding process to influence or control the heat balance and, in particular, the heat input into the workpiece (16) to be worked, ~~characterized in that as~~ wherein said welding process phase having a low energy input a cold-metal-transfer phase (28) is used, during which the welding wire (13) is conveyed in the direction of the workpiece (16) until contacting the same, and the wire conveyance is subsequently reversed after the creation of a short circuit, thus conveying the welding wire

(13) back as far as to a predefined distance (30) from the workpiece (16).

Claim 2. (Currently Amended) A method according to claim 1, ~~characterized in that~~ wherein a pulse current phase (27) is used as said welding process phase having a high energy input.

Claim 3. (Currently Amended) A method according to claim 1, ~~characterized in that~~ wherein a spray-arc phase is used as said welding process phase having a high energy input.

Claim 4. (Currently Amended) A method according to ~~any one of claims 1 to 3, characterized in that~~ claim 1, wherein during the conveyance of the welding wire (13) in the direction of the workpiece (16), the welding current (I) is changed, particularly increased, so as to induce the formation of a droplet and the incipient melting of the end of the welding wire.

Claim 5. (Currently Amended) A method according to ~~any one of claims 1 to 4, characterized in that~~ claim 1, wherein the welding wire (13) is moved back after having contacted the workpiece (16), thus detaching the droplet (32) and the incipiently melted material from the welding wire (13).

Claim 6. (Currently Amended) A method according to ~~any one of claims 1 to 5, characterized in that~~ claim 1, wherein the duration of the individual welding process phases is controlled as a function of the adjusted welding current (I) and, in particular, directly proportionally to the adjusted welding current (I) or an adjusted power, respectively.

Claim 7. (Currently Amended) A method according to ~~any one of claims 1 to 6, characterized in that~~ claim 1, wherein the ratio between the welding process phase having a high energy input and the welding process phase having a low energy input is changed as a function of the welding current (I) or an adjusted power, respectively.

Claim 8. (Currently Amended) A method according to ~~any one of claims 1 to 7, characterized in that~~ claim 1, wherein at least one welding parameter of the heat input into the workpiece (16) to be worked is selected or adjusted on the welding apparatus (1), with the ratio between the welding process phase having a high energy input and the welding process phase having a low energy input being automatically determined and controlled as a function of the selected or adjusted heat input value.

Claim 9. (Currently Amended) A method according to ~~any one of claims 1 to 8, characterized in that~~ claim 1, wherein the ratio of the cyclically alternating welding process phases is determined as a function of the parameters used for the welding process such as, for instance, a welding current (I) and/or a parameter for the heat input and/or the material of the workpiece (16) to be worked and/or the material of the welding wire (13) and/or the employed welding gas.

Claim 10. (Currently Amended) A method according to ~~any one of claims 1 to 9, characterized in that~~ claim 1, wherein the welding process phase (28) having a low energy input is initiated by specifying the number of pulses in the pulse current phase (27) or by predetermining a time period or by applying a trigger signal.

Claim 11. (Currently Amended) A method according to ~~any one of claims 1 to 10, characterized in that~~ claim 1, wherein the welding process is started according to the lift-arc principle.

Claim 12. (Currently Amended) A method according to ~~any one of claims 1 to 11, characterized in that~~ claim 1, wherein an additional welding process phase having a high energy input is implemented over a defined period upon ignition of the electric

arc (15) and prior to the cyclic alternation of the at least two different welding process phases.

Claim 13. (Currently Amended) A method according to ~~any one of claims 2 to 12, characterized in that~~ claim 1, wherein the energy input, in particular the welding current (I), during the cold-metal-transfer phase (28) is lower than the energy input, in particular the welding current (I), during the pulse current phase (27).

Claim 14. (Currently Amended) A method according to ~~any one of claims 1 to 13, characterized in that~~ claim 1, wherein the wire advance speed is changed during the different welding process phases.

Claim 15. (Currently Amended) A welding apparatus (1) including a welding current source (2), a control device (4), a welding torch (10) and a welding wire (13), wherein different welding parameters are adjustable via an input and/or output device (40) provided on the welding apparatus, or via a remote controller, ~~characterized in that~~ wherein an adjustment element for the adjustment of the heat balance or heat input into the workpiece (16) to be worked, via a cyclic combination of at least one welding process phase having a low energy input and a welding process phase having a high energy input, is arranged on the

input and/or output device (40) of the welding apparatus, and/or the remote controller, wherein said welding process phase having a low energy input is comprised of a cold-metal-transfer phase (28), during which the welding wire (13) is conveyed in the direction of the workpiece (16) until contacting the same, and the wire conveyance is subsequently reversed after the creation of a short circuit, thus conveying the welding wire (13) back as far as to a predefined distance (30) from the workpiece (16).

Claim 16. (Currently Amended) A welding device according to claim 15, ~~characterized by~~ comprising an embodiment for carrying out the method according to ~~any one of claims 1 to 14~~ claim 1.

Claim 17. (Currently Amended) A welding device according to claim 15 ~~or 16, characterized in that~~ , wherein a further selection or adjustment element (46) is provided for the selection of the welding process phases to be used.

Claim 18. (Currently Amended) A welding device according to ~~any one of claims 15 to 17, characterized in that~~ claim 15, wherein at least one display (42, 43, 44, 45) is provided for the representation of the selected welding parameters and/or the selected welding process phases.

Claim 19. (Currently Amended) A welding device according to ~~any one of claims 15 to 18, characterized in that~~ claim 15, wherein a selection or adjustment element (46) is provided for the selection of the material of the workpiece (16) to be worked.

Claim 20. (Currently Amended) A welding device according to any one of ~~claims 15 to 19, characterized in that~~ claim 15, wherein a selection or adjustment element (46) is provided for the selection of the material of the employed welding wire (13).

Claim 21. (Currently Amended) A welding device according to ~~any one of claims 15 to 20, characterized in that~~ claim 15, wherein a cyclic combination of the cold-metal-transfer phase (28) with a pulse current phase is adjustable at the input and/or output device (40).

Claim 22. (Currently Amended) A welding device according to ~~any one of claims 15 to 20, characterized in that~~ claim 15, wherein a cyclic combination of the cold-metal-transfer phase (28) with a spray-arc phase is adjustable at the input and/or output device (40).

Claim 23. (Currently Amended) A welding device according to ~~any one of claims 15 to 22, characterized in that~~ claim 15, wherein a selection or adjustment element (48) is provided for

the adjustment of the ratio of the selected welding process phases and, in particular, the duration of the respective welding process phase.

Claim 24. (Currently Amended) A welding device according to ~~any one of claims 18 to 23, characterized in that~~ claim 18, wherein a memory is provided for the storage of welding parameter adjustments.

Claim 25. (Currently Amended) A welding device according to ~~one or several of claims 18 to 23, characterized in that~~ claim 18, wherein a cyclic combination of a spray-arc welding process with a cold-metal-transfer welding process is adjustable at the input and/or output device (40).

Claim 26. (Currently Amended) A welding device according to ~~one or several of claims 18 to 23, characterized in that~~ claim 18, wherein a cyclic combination of a spray short-circuit arc welding process with a cold-metal-transfer welding process is adjustable at the input and/or output device (40).

Claim 27. (Currently Amended) A welding device according to ~~one or several of claims 18 to 23, characterized in that~~ claim 18, wherein a cyclic combination of a pulse welding process with

a spray-arc welding process is adjustable at the input and/or output device (40).

Claim 28. (Currently Amended) A welding device according to ~~one or several of claims 18 to 27, characterized in that~~ claim 18, wherein a selection or adjustment element (48) is provided for the adjustment of the ratio of the selected welding process phases and, in particular, the duration of the respective welding process phase.

Claim 29. (Currently Amended) A welding device according to ~~one or several of claims 18 to 28, characterized in that~~ claim 18, wherein a memory is provided for the storage of welding parameter adjustments.